

## **REMARKS**

Claims 1-20 are all the claims pending in the application.

### **I. Claim Objections**

The Examiner has objected to claims 3, 9, and 14. Applicants respectfully submit that claims 3, 9, and 14 should contain no objectionable language. Accordingly, Applicants respectfully request that the Examiner withdraw the objections to claims 3, 9, and 14.

### **II. Claim Rejections under 35 U.S.C. § 112**

Claims 1-17 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants respectfully submit that claims 1-17 are not indefinite and request that the Examiner withdraw the 35 U.S.C. § 112 rejection.

### **III. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-2, 6-9, 12, and 14-16<sup>1</sup> are rejected under 35 U.S.C. § 103(a) as being unpatentable over Motley (U.S. 6,721,282) in view of Ferenc et al. (U.S. 4,962,497) further in view of LoGalbo et al. (U.S. 2002/0093928). Claims 4, 13, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Motley (U.S. 6,721,282) in view of Saidi et al. (U.S. 7,106,738) further in view of Terho et al. (U.S. 6,507,590). Applicants traverse these rejections because the cited reference fails to disclose or suggest all of the claim limitations.

#### **Claim 1**

Claim 1 recites, *inter alia*:

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<sup>1</sup> The Examiner mistakenly fails to indicate on page 6 of the Office Action that claims 6 and 7 are also rejected under 35 U.S.C. § 103(a).

“... wherein the formatting means determines whether size of a section of the IP datagrams is too large for insertion in the time slots **based on the predicted available bandwidth.**”

The Examiner maintains the previous rejection on the basis that LoGalbo discloses determining whether the size of a section of the IP datagram is too large for insertion means. *See* page 2 of Office Action. In particular, the Examiner alleges that page 5, paragraph 0050 of LoGalbo discloses the cited portion of the claim. The Examiner alleges that LoGalbo discloses the following: “When the IP packets are too big to be carried in one of the data blocks 210 of the TDMA slot (determines whether size of a section of the IP datagram is too large for insertion means), the IP packets are split into segments and are carried within multiple data blocks 210 that may span many TDMA slots 200 (insertion in the time slots based on the predicted available bandwidth means).” *See* pages 2 and 7 of Office Action. Applicants respectfully disagree.

LoGalbo discloses splitting IP packets if they are determined to be too large for a data block of a TDMA slot. *See* LoGalbo, pg. 6, p0050. If it is determined that the IP packets are too large for the data block of the TDMA slot, the IP packets are split and carried in multiple data blocks 210. *See* LoGalbo, pg. 6, p0050. This is confirmed by the Examiner in the Response to Arguments Section of the current Office Action. *See* page 2 of Office Action. The Examiner states:

“When the IP packets are too big to be carried in one of the data blocks 210 of the TDMA slot, the IP packets are split into segments and are carried within multiple data blocks 210 that may span many TDMA slots 200.” *See* page 2 of Office Action.

Further, it is common knowledge to one skilled in the art that TDMA slots are fixed in size, e.g., the size of the slot is set and do not vary in size. As confirmed in LoGalbo, the TDMA slot is of a fixed size. *See* LoGalbo, pg. 4, p0042, pg. 5, p0045. Further, LoGalbo states “. . . the

TDMA time slots are of fixed size.” *See* LoGalbo, pg. 4, p0042. Therefore, determining available bandwidth does not factor into whether an IP packet fits into a TDMA slot as the Examiner purports. Stated differently, according to LoGalbo, determining whether an IP packet fits into a TDMA slot is determined by the fixed size of the TDMA slot and not the available bandwidth. Therefore, LoGalbo fails to disclose or suggest “wherein the formatting means determines whether size of a section of the IP datagrams is too large for insertion in the time slots based on the predicted available bandwidth” as recited, *inter alia*, in claim 1.

For at least these reasons, Applicants respectfully submit that claim 1 is patentable over the cited prior art. To the extent that independent claim 6 incorporates features of claim 1, Applicants respectfully submit that claim 6 is patentable over the cited prior art. Further due to their dependency on claims 1 and 6, Applicants respectfully submit that claims 2, 5, 7-9, 12, and 14-16 are also patentable over the cited prior art.

#### **Claim 4**

Claim 4 recites:

“A demultiplexing device adapted to demultiplex a compressed data block comprising a compressed block and at least one IP datagram section, wherein the demultiplexing device comprises:

    deframing means for extracting the at least one IP datagram section from a frame comprising data from a mobile telecommunication network and the at least one IP datagram section and concatenating a plurality of IP datagram sections in order to direct at least one of the plurality of IP datagram sections to an Ethernet network; and

    data decompression means for reconstituting active and static channels from the compressed data block.”

The Examiner concedes that Motley in view of Saidi does not expressly disclose “a frame comprising data from a mobile telecommunication network and the at least one IP datagram

section and concatenating a plurality of IP datagram sections in order to direct at least one of the plurality of IP datagram sections to an Ethernet network” as recited in claim 4. *See* page 11 of Office Action. To cure this deficiency, the Examiner alleges that Figure 8 and column 8, lines 32-36 of Tehro disclose this feature of claim 4. *See* page 11 of Office Action. In particular, it appears that the Examiner is alleging that radio path 18b, mobile phone network 6, and data interface unit 19 correspond to an Ethernet network of claim 4. Applicants respectfully disagree.

Tehro discloses a mobile network 6 and a data interface unit 19 consisting of a mobile phone 20 and a mobile station 12 with a data adapter 21. *See* Tehro, col. 3, lns. 23-25, 36-42, figs. 1 and 2. The data interface unit 19 is connected wirelessly to the mobile network 6 via radio path 18b. *See* Tehro, col. 3, lns. 34-38. When the mobile phone 20 receives RPL frames 61 containing IP data packets from the radio telephone system through the data adapter 21 to the mobile station (i.e., personal computer) 12, the data blocks 63 are extracted from the data frame 61 and fed to the portable computer 12. *See* Tehro, col. 8, lns. 24-37. The portable computer 12 uses a data communication program to strip the data packets 58 based on the data communications protocol. *See* Tehro, col. 8, lns. 29-33. That is, Tehro discloses receiving data packets in RPL frames 61 over a radio path 18b from the radio telephone system and providing the RPL frames 61 to a portable computer which strips the data packets from the RPL frames 61 based on the data communications protocol, such that the computer is part of a LAN. Nowhere does Tehro disclose providing the data packet to an Ethernet network. Therefore, Tehro neither discloses nor suggests “concatenating a plurality of IP datagram sections in order to direct at least one of the plurality of IP datagram sections to an Ethernet network” as recited in claim 4.

For at least these reasons, Applicants respectfully submit that claim 4 is patentable over the cited prior art. Further, Applicants respectfully submit that claim 4 is patentable over the cited prior art to the extent that it also incorporates features of claim 1. Further, due to their dependency on claim 4, Applicants respectfully submit that claims 13 and 17 are patentable over the cited prior art.

**Claim 15**

Claim 15 recites:

“The method according to claim 1, wherein the multiplexing device further comprises a prediction unit which uses information, supplied by the compressor, of an available capacity between compressed data blocks to determine the available bandwidth.”

With further regard to claim 15, the Examiner alleges that figure 1, reference 3 and column 2, line 46 of Motley disclose the features claim 15. *See* page 10 of Office Action. In particular, it appears that the Examiner is alleging that the input/output 3 of apparatus 1 of Motley corresponds to the prediction unit of claim 15. Applicants respectfully disagree.

Motley discloses that the input/output 3 of the telecommunication apparatus 1 is compressed data multiplexed and converted to Ethernet format. *See* Motley, col. 2, lns. 41-42. This Ethernet formatted data is sent to a high-speed router 7 and converted to a digital network format. *See* Motley, col. 2, lns. 42-44. In this disclosure of Motley, there is no determination of the available capacity between compressed data blocks. Further, there is no disclosure of a prediction unit which determines available bandwidth using the available capacity between compressed data blocks. Therefore, Motley fails to disclose or suggest “wherein the multiplexing device further comprises a prediction unit which uses information, supplied by the

compressor, of an available capacity between compressed data blocks to determine the available bandwidth” as recited in claim 15.

For at least these reasons, Applicants respectfully submit that claim 15 is patentable over the cited prior art.

**Claim 16**

Claim 16 recites:

“The method according to claim 6, wherein the negative acknowledgement indicates that an IP datagram was not received.”

With further regard to claim 16, the Examiner concedes that Motley fails to disclose or suggest a negative acknowledgement. *See* page 9 of Office Action. To cure this deficiency, the Examiner relies on page 5, paragraphs 0050 and 0052 of LoGalbo. *See* page 9 of Office Action. The Examiner further states in the Response to Arguments Section that a negative acknowledgement would have been obvious to one of ordinary skill in the art because LoGalbo discloses that IP packets are split into segments and carried in multiple data blocks 210 that may span many TDMA slots 200 when the IP packets are too large for one data block 210. *See* page 3 of Office Action. Applicants respectfully disagree.

LoGalbo discloses that IP packets that are too large for a data block of a TDMA slot are split into multiple data blocks 210 that span several TDMA slots. *See* pg. 6, p0050. LoGalbo does not disclose or suggest any acknowledgements that are sent in the process. Assuming *arguendo* that an acknowledgement is sent, the acknowledgement would merely indicate that an IP packet is too large for a data block of a TDMA slot and therefore must be split and sent across

several data blocks that span several TDMA slots. Such an acknowledgement is neither negative nor indicates that an IP datagram was not received. LoGalbo merely discloses that a IP packet much be split if it is too large. Thus LoGalbo provides no teaching of sending an acknowledgement if the IP packet is not sent. Therefore, LoGalbo fails to disclose or suggest “wherein the negative acknowledgement indicates that an IP datagram was not received” as recited in claim 16.

For at least these reasons, Applicants respectfully submit that claim 16 is patentable over the cited prior art.

Accordingly, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. § 103(a) rejection.

#### **IV. Allowable Subject Matter**

The Examiner has indicated that claims 3 and 10-11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office Action. Applicants respectfully submit that claims 3 and 10-11 have been rewritten to overcome any 35 U.S.C. § 112 rejections. Accordingly, Applicants submit that claims 3 and 10-11 should be deemed allowable.

#### **V. New Claims**

Applicants respectfully submit that new claims 18-20 are patentable over the cited prior art at least for their recited subject matter and dependency on claims 1 and 6.

#### **VI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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